Used Oil

Potential Environmental Impacts

Used oil does not break down easily in the environment and can contain toxic chemicals and heavy metals. If spilled on the ground, poured down storm drains or disposed of with trash, it can pollute surface water or groundwater.

- One gallon of used oil can pollute 1 million gallons of fresh water – a year's supply for fifty people.
- Used oil can foul sewage treatment processes.
- Because of its properties, a cup of oil can spread a very thin sheen over more than an acre of calm water.
- An oil sheen can block sunlight, impair photosynthesis and prevent the replenishment of dissolved oxygen, which leads to fish kills.

Improper used oil storage: leaking, unlabeled drums on ground

Legal Requirements

- Used oil includes crankcase (engine) oil, brake fluid, automatic transmission fluid, power steering fluid, liquid and semi-solid gear, chain, and ball bearing lubricants, and hydraulic fluid. Used oils can be mixed and managed together.
- Materials that contain or are contaminated with used oil can also fall under the definition of used oil, such as used oil filters, oily rags and wipers, used absorbents, and oily wastewater.
- Used oil is a regulated waste in Connecticut [RCSA Section 22a-449(c)-119 and 40 CFR 279], and must be recycled (includes burning for energy recovery) [RCSA Section 22a-241b-2(1)(I)].
- Used oil is not considered hazardous waste unless it is mixed with a hazardous waste such as a chlorinated solvent. If used oil has been mixed with a hazardous waste, see Appendix A for more information on hazardous waste determinations and proper storage and disposal requirements.

- There are a few options for managing used oil. Two of the most common are:
  - collecting it, testing it and having it hauled away for recycling, or
  - collecting it, testing it and burning it in on-site space heaters.

  If the used oil tests positive for hazardous constituents, it must be managed as hazardous waste (see Appendix A).
- If the used oil does not test positive for hazardous waste, the options for management are:

  - COLLECT, TEST, HAUL

    1. Collect and store used oil in a secure collection tank or drum, separate from other wastes (proper storage described below).
    2. Test the used oil for total halogen content (see Appendix A). Maintain records on site.
    3. Contract with a permitted waste oil transporter to haul oil to a permitted recycling facility. Commercial haulers of such used oil must be permitted to transport used oil in Connecticut. Contact CT-DEP's Waste Bureau at (860) 424-4193 for a list of permitted commercial transporters.

  OR

  - COLLECT, TEST, BURN

    1. Collect and store used oil in a secure collection tank or drum, separate from other wastes (proper storage described below).
    2. Test the used oil for total halogen content (see Appendix A). Maintain records on site.
    3. Burn the used oil in space heaters for energy recovery (i.e., to heat your shop). Used oil heaters must be designed for that purpose and
       a. have a maximum design capacity of not more than 0.5 million BTUs per hour; and
       b. vent combustion gases outside the building; and
       c. burn only used oil that you generate or that you have collected from your do-it-yourself oil changers.

    If you have questions on burning used oil at your facility, contact CT-DEP's Waste Bureau at (860) 424-4193 and Air Bureau at (860) 424-3443.

What are the requirements for Used Oil Storage?

- Any storage tank or container for used oil must be on a base that is sufficiently impervious to prevent spills or leaks from reaching soil, groundwater, or surface waters [RCSA Sections 22a-449(c)-100(c)(31) and 22a-449(c)-119(b)(2)(A) and (B)]. A base is considered to be sufficiently impervious if it is:
  - Free of gaps, cracks, and areas of bare earth;
  - Capable of containing spills (i.e., used oil does not leak or penetrate through it);
  - Is not damaged or degraded by contact with used oil (e.g., uncoated asphalt, which will soften and degrade when exposed to used oil for long periods); and,
  - Free of floor drains, catch basins, or other similar structures that would allow used oil to escape to the environment.

- In addition to the having an impervious surface as described above, any storage tank or container that is located outdoors must be provided with secondary containment [RCSA Sections 22a-449(c)-100(c)(31) and 22a-449(c)-119(b)(2)(A), (C), and (D)].
- Examples of secondary containment for containers would include berms or walls, and specially-designed secondary containment pallets (available through industrial supply companies). Examples of secondary containment for tanks would include berms or walls, and double-walled tanks.
- Label the tank or container "Used Oil" [40 CFR 279.22(c)].

Double-walled above ground storage tank

- Use a licensed waste oil transporter to haul the oil to a treatment facility for processing [CGS Section 22a-454].
- Keep results of used oil testing for at least 3 years [RCSA Section 22a-449(c)-119(b)(1)(C)].
- Prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan if you store more than 1,320 gallons of used (or new) oil. Containers of less than 55 gallons are exempt. [40 CFR 112.1]. See the SPCC Plans Fact Sheet for more information.

How should Used Oil Absorbent Material and Filters be disposed?

- Materials that contain or are contaminated with used oil can also fall under the definition of used oil. The most common of these materials are used oil absorbent pads, socks, mats, rags and wipers, and loose absorbents (such as kitty litter, speedi-dry, and sawdust).

- All used oil absorbent material must be collected, tested for hazardous constituents and transported either as hazardous waste or used oil, depending on the test results. However, if the absorbents do not have free-draining oil and are not going to be burned for energy recovery, they are no longer subject to regulation as used oil. In this case, these soaked absorbents must have a hazardous waste determination and be disposed of as hazardous or CT-Regulated waste. See Appendix A for more information.

- Oil filters are regulated as used oil and cannot be thrown in the trash unless they have been punctured and hot drained for 24 hours.

Are there any more requirements?

- Air conditioning systems may also generate used oils that are contaminated with refrigerants (such as Freon™). This type of used oil must be recycled for its Freon™ content. See the Refrigerants (CFCs) fact sheet for more information.

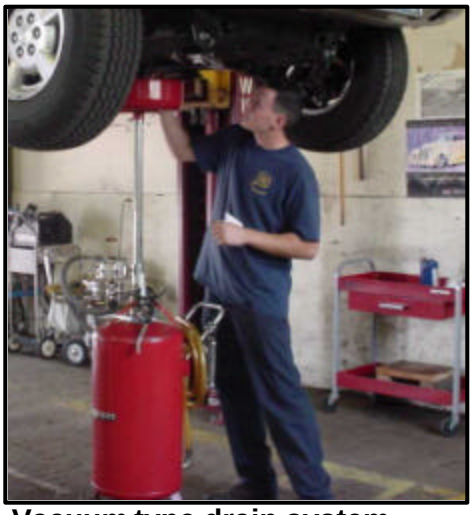
- Spills of used oil (or any other petroleum liquids, chemicals, or hazardous waste) must immediately be reported via CT-DEP's 24-hour spill reporting number: (860) 424-3338.

- If only used oil generated on-site is stored in the tank or container, no state permits are needed to install an above ground collection tank, but check with your municipality because local permits might be needed.

- CT-DEP discourages installation of new underground storage tanks (UST) for used oil. Since November 1985, it has been illegal to install any nonresidential UST or component that is not either fiberglass-reinforced plastic (i.e., noncorrosive) or has a manufacturer-applied anti-corrosive coating and cathodic protection. On or after October 1, 2003, any tank or component installed must be of double-walled construction with continuous interstitial monitoring. See the Petroleum Storage Tanks Fact Sheet for more information.

Best Management Practices

- ★ Do not mix used oil with anything else, such as chlorinated solvents, or expose oil to electrical contact cleaner or carburetor cleaner which can contaminate used oil while in an engine. Doing so will result in the need to perform a hazardous waste determination on the used oil mixture to establish whether or not the mixture must be managed as a hazardous waste.
- ★ Purchase a non-spill vacuum-type system for spill-proof oil changes.
- ★ Burn your used oil in a used oil fuel space heater. This is also a cost saving measure that eliminates the cost of waste oil removal.
- ★ Recycle used oil filters as scrap metal. Puncture and hot drain them for 24 hours first. The drained oil should be managed as used oil. If you generate large numbers of filters, consider purchasing a filter crusher.



Vacuum-type drain system

- ★ Use oil absorbent materials to clean up small drips and spills.
- ★ Locate any outdoor used oil storage tanks or containers in a fenced area, which will help prevent unauthorized access or vandalism, minimize possibility of fire or explosion and accidental release of oil to the environment.
- ★ Lock the tank or container's fill spout when not in use.

- ★ Provide a roof over outdoor tanks or containers to protect the secondary containment from filling up with rainwater, which may overflow - potentially contaminating the runoff.
- ★ Visually inspect the tank or container on a weekly basis for leaks or malfunctions. Maintain written inspection records.
- ★ Instruct all employees who handle used oil on the proper operation and management of the oil storage area. Assign one person the responsibility for monitoring oil storage.
- ★ If providing a collection tank or container for used oil from do-it-yourselfers, clearly label the tanks or containers to indicate the importance that ONLY used oil be placed in the tank. Remember that you'll be responsible to pay for disposal of used oil that is contaminated with hazardous waste.
- ★ Keep records of used oil collection.

Pollution Prevention Checklist

- ✓ Do you have oil absorbent materials readily available for use by your staff? YES NO N/A
- ✓ Do you drain oils using a non-spill vacuum-type system? YES NO N/A

Did You Know?
One gallon of used oil yields the same 2.5 quarts of lubricating oil as 42 gallons of virgin crude oil. Re-refining used oil only requires 1/3 of the energy needed to refine crude oil.